WHAT IS CLAIMED IS:

1. An apparatus for database synchronization in a duplex system, each system of the duplex system comprising:

a database having a Change List Table (CLT) that provides transaction synchronization;

a Database Management System (DMS) that manages the database;

an Application Process (AP) that records information about a transaction in the CLT and maintains the database synchronization by performing a transaction synchronization between the duplex system using the CLT;

a Process Management Block (PRMB) that manages the AP and manages communications with the other system of the duplex system;

a message transmission process that transmits an outgoing message communicated from the AP to the other system; and

a message receive process that receives an incoming message transmitted from the other system and conveys the incoming message to the AP.

2. The apparatus of claim 1, wherein the AP comprises:

an Application Service Element (ASE) that performs the transaction, records the information about the transaction on the CLT of the database, and performs the transaction synchronization between the duplex system using the CLT;

a first query interface library that interfaces the ASE with the CLT;

a second query interface library that interfaces the ASE with the message transmission process; and

a recovery process that is driven when a fault is generated in one system of the duplex system and performs the database synchronization between the duplex system using the CLT.

3. The apparatus of claim 2, wherein if a transaction that needs synchronization is performed, the ASE records the information about the transaction on the CLT, then deletes the information from the CLT if the transaction is reflected to the database of the other system successfully, and maintains the information in the CLT if the transaction is not successfully reflected to the database of the other system.

4. A method for database synchronization in a duplex database system, wherein each database system of the duplex system has a main memory database, the method comprising:

identifying whether the main memory database of either database system has encountered a fault;

checking whether a previous transaction corresponding to a current transaction is listed in a Change List Table (CLT) of a primary database of the main memory databases of the duplex system; and

maintaining the database synchronization by reflecting a result of the current transaction to the database of the other database system in accordance with a first type of the current transaction and a second type of the previous transaction listed in the CLT.

5. The method of claim 4, further comprising:

reflecting an update transaction to the database of the other system as the result if the current transaction is the update transaction and the previous transaction listed in the CLT is the update transaction;

reflecting an insert transaction to the database of the other system as the result if the previous transaction listed in the CLT is the insert transaction and the current transaction is the update transaction; and

deleting the previous transaction from the CLT if the reflection of the result to the other system is successful and maintaining the previous transaction in the CLT if the reflection of the result.

6. The method of claim 4, further comprising:

reflecting an insert transaction to the database of the other system as the result if the current transaction is the insert transaction and the previous transaction is the insert transaction;

reflecting an update transaction to the database of the other system as the result if the current transaction is the insert transaction and the previous transaction listed in the CLT is either a delete transaction or the update transaction; and

deleting the previous transaction from the CLT if the reflection of the result to the other system is successful and maintaining the previous transaction in the CLT if the reflection of the result fails.

7. The method of claim 4, further comprising:

reflecting a delete transaction to the database of the other system as the result if the current transaction is the delete transaction and the previous transaction listed in the CLT is an update transaction;

not reflecting the current transaction as the result to the database of the other system if the previous transaction listed in the CLT is an insert transaction and the current transaction is the delete transaction; and

deleting the previous transaction from the CLT if the reflection of the result to the other system is successful and maintaining the previous transaction in the CLT if the reflection of the result fails.

8. The method of claim 4, further comprising:

recording information about the current transaction in the CLT if the previous transaction is not listed in the CLT;

reflecting the recorded transaction as the result to the other system;

deleting the information from the CLT if the reflection of the result is successful; and

maintaining the information about the transaction in the CLT if the reflection of the result fails.

9. The method of claim 4, further comprising:

reflecting contents of the primary database updated since the fault is generated to a fault system of said duplex system by sequentially searching the CLT of the primary system to identify the updated contents, after the fault system is restarted; and

deleting information about the updated contents identified in the CLT if the reflection is successful and maintaining the information in the CLT if the reflection fails.

10. The method of claim 9, further comprising:

transmitting a recovery completion message, after restarting the fault system, from the fault system to the primary system informing the primary system that the fault system can be recovered to a normal status;

receiving the recovery completion message by the primary system;

sequentially searching the CLT of the primary system to check the contents updated after the fault is generated;

performing a real-time transaction for a message received from a counterpart system;

selecting the updated contents identified by the CLT information from a User Profile Table (UPT) of the database in the primary system and recording the information about an update transaction of the updated contents within the CLT; and

reflecting the selected update contents from the primary system to the fault system.

11. A method for database synchronization in a duplex system, comprising :

identifying whether a previous transaction list related to a current transaction exists in a Change List Table (CLT) of a first system of the duplex system;

maintaining the database synchronization by reflecting a resulting transaction to a database of the other system according to a type of the current transaction and the type of the previous transaction listed in the CLT;

recording information about the current transaction in the CLT if the previous transaction is not listed in the CLT;

reflecting the current transaction to the database of the other system;

deleting the information about the current transaction from the CLT if the reflection is successful; and

maintaining the information in the CLT if the reflection fails.

12. The method of claim 11, further comprising:

reflecting the current transaction to the database of the other system as the resulting transaction if the current transaction is an update transaction and the previous transaction in the CLT is the update transaction, and reflecting an insert transaction to the database of the other system as the resulting transaction if the previous transaction in the CLT is the insert transaction and the current transaction is the update transaction; and

deleting the information of the previous transaction from the CLT if the reflection of the resulting transaction to the database of the other system is successful and maintaining the

information of the previous transaction in the CLT if the reflection of the resulting transaction fails.

13. The method of claim 11, further comprising:

reflecting an insert transaction to the database of the other system as the resulting transaction if the current transaction is the insert transaction and the previous transaction listed in the CLT is the insert transaction, and reflecting an update transaction to the other system as the resulting transaction if the previous transaction listed in the CLT is either a delete transaction or the update transaction; and

deleting the information of the previous transaction from the CLT if the reflection of the resulting transaction to the other system is successful and maintaining the information of the previous transaction in the CLT if the reflection of the resulting transaction fails.

14. The method of claim 11, further comprising:

reflecting an insert transaction to the database of the other system as the resulting transaction if the current transaction is a delete transaction and the information of the previous transaction in the CLT is an update transaction, and not reflecting the delete transaction to the other system as the resulting transaction if the previous transaction in the CLT is the insert transaction; and

deleting the information of the previous transaction from the CLT if the reflection of the resulting transaction to the other system is successful and maintaining the information of the previous transaction in the CLT if the reflection of the resulting transaction fails.

15. A method for database synchronization in a duplex system, comprising:

reflecting contents updated, after a fault is generated, to a fault system of the duplex system after the fault system is restarted, by sequentially searching a Change List Table (CLT) of a database in a normal system of the duplex system; and

deleting information about the updated contents searched from the CLT if the reflection to the other system is successful, and maintaining the information in the CLT if the reflection fails.

16. The method of claim 15, further comprising:

transmitting a recovery completion message from the fault system to the normal system, if the fault system is restarted, indicating that the fault system can be recovered from the normal system;

receiving the recovery completion message by the normal system;

sequentially searching the CLT of the normal system to check CLT information updated after the fault is generated;

performing a current transaction for a message received from a counterpart system;

selecting the updated contents from a Use Profile Table (UPT) corresponding to the CLT updated information within a database in the normal system, and recording subsequent information about an update transaction in the CLT; and

transmitting a message inquiring transaction process from the normal system to the fault system so that the fault system performs the selected update transaction.

17. The method of claim 16, further comprising:

transmitting a requesting message process from a recovery process of the normal system to a Process Management Block (PRMB) of the fault system;

transmitting an inquiring message transmission from the PRMB of the fault system to the counterpart system so that the current transaction message is transmitted by the counterpart system; and

transmitting a completing message process as a response to the message for requesting message process from the PRMB of the fault system to the recovery process of the normal system.

18. A duplex system having a primary system with a primary database and a redundant system with redundant database, wherein the improvement comprises:

a table that records key information regarding each transaction performed on the primary database, which must also be performed on the redundant database to maintain synchronization between the primary and redundant databases, wherein

the key information for an i^{th} transaction recorded in the table is removed from the table when the i^{th} transaction is successfully performed on the redundant database.

19. The duplex system of claim 18, wherein:

the i^{th} transaction performed on the primary database is communicated to the redundant system in real time, after the key information regarding this transaction is recorded to the table;

the redundant system attempts to perform the i^{th} transaction on the redundant database; and

a success message is communicated to the primary system if the redundant system successfully performs the i^{th} transaction on the redundant database and the success message causes the primary system to remove the key information for the i^{th} transaction from the table.

20. The duplex system of claim 19, wherein:

current key information of a current transaction performed on the primary database is compared by the primary system with previous key information recorded in the table regarding a previous transaction;

the current key information is recorded to the table if it does not match the previous key information; and

the current key information is not recorded to the table if it matches the previous key information.

21. The duplex system of claim 20, wherein:

the primary system compares the type of the current transaction with the type of the previous transaction, if a first portion of the current key information matches a second portion of the previous key information;

the primary system communicates the current transaction to the redundant system as an update type of transaction if the current transaction and the previous transaction are both update types of transactions; and

the primary system communicates the current transaction to the redundant system as an insert type of transaction if the current transaction is an update type of transaction and the previous transaction is an insert type of transaction.

22. The duplex system of claim 21, wherein:

the primary system communicates the current transaction to the redundant system if the current transaction and the previous transaction are both insert types of transactions; and

the primary system communicates the current transaction to the redundant system as the update type of transaction if the current transaction is the insert type of transaction and the previous transaction is either a delete type of transaction or the update type of transaction.

23. The duplex system of claim 22, wherein:

the primary system communicates the current transaction to the redundant system if the current transaction is the delete type of transaction and the previous transaction is the update type of transaction; and

the primary system does not communicate the current transaction to the redundant system if the current transaction is the delete type of transaction and the previous transaction is the insert type of transaction.

24. The duplex system of claim 18, wherein:

when a fault occurs in the redundant system, the primary system sequentially accesses a k^{th} element of key information relating to the i^{th} transaction, of j transactions having key information stored to the table;

for each k^{th} element of key information accessed, the primary system recovers the related i^{th} transaction information from a User Profile Table (UPT) of the primary database and communicates the related i^{th} transaction information to the redundant system; and

the k^{th} element of key information relating to the i^{th} transaction recorded in the table is removed from the table when the i^{th} transaction is successfully performed on the redundant database.